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| Star. | 1910 |  | P. | D. | Mags. | Nights. | Date. |
|---|---|---|---|---|---|---|---|
|  | R.A. | Dec. |  |  |  |  |  |
|  | h m s | ° ′ | ° | ″ |  |  |  |
| Σ 2161 (ρ Herculis) | 20·6 | 37 13 | 314·9 | 3·89 | 4·6, 5·5 | 3 | 1912·423 |
| ,, 2382 ($\epsilon^1$ Lyræ) | 18 41·3 | 39 35 | 11·2 | 2·95 | 4·6, 6·3 | 3 | 1911·437 |
| ,, 2383 ($\epsilon^2$ Lyræ) | 41·4 | 39 31 | 123·8 | 2·30 | 4·9, 5·2 | 3 | 1911·437 |
| ,, 2628 | 20 3·4 | 9 8 | 345·3 | 3·98 | 6·1, 8·2 | 3 | 1911·602 |
| ,, 2634 | 5·4 | 16 32 | 11·9 | 5·44 | 8·0, 9·5 | 3 | 1911·602 |
| ,, 2641 | 7·4 | 3 32 | 169·8 | 20·83 | 7·5, 11·2 | 3 | 1911·602 |
| ,, 2881 | 22 10·4 | 29 8 | 98·9 | 1·48 | 7·7, 8·2 | 4 | 1911·650 |
| ,, 2895 | 16·5 | 24 29 | 35·3 | 8·10 | 8·5, 10·0 | 2 | 1911·723 |

### *Notes.*

Σ 1130. The published measures of this star are discordant, especially those of angle. The distance is diminishing.

Σ 1424 and Σ 1877. Means of measures in 1911 and 1912.

Σ 2052. Now closing rather rapidly.

*Ashstead, Surrey,*
*June* 1912.

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## *Two probably Variable Stars.* By the Rev. T. E. Espin, M.A.

No. 1. The star B.D. + 46° 1635, R.A. $10^{h}\ 22^{m}\ 47^{s}{\cdot}4$, Decl. + 46° 15′·8 (1855), Mag. 9·3. On April 2 it had a magnitude about 9·0. On subsequent nights it was compared with B.D. + 46° 1637, Mag. 8·8 and B.D. + 46° 1643, Mag. 8·4 with the following results:—

|  |  |
|---|---|
| 1912 April 8 | 8·4 |
| 10 | 8·4 |
| 11 | 8·4 |
| 16 | 8·4 |

The colour is pale orange-red, and the spectrum type III.

No. 2. A star which is not in the B.D. Its place from B.D. + 44° 2265 = A.G. (Bonn) 8924 is—

R.A. $13^{h}\ 16^{m}\ 56^{s}{\cdot}3$. Decl. + 44° 30 42″·9 (1900)

The observations are—

|  |  |  |
|---|---|---|
| 1912 May 13 | 9·2 | Red, Type IV. |
| 18 | 9·5 | Red, Type IV. |

The star B.D. + 44° 2267 was found to be missing on both nights, and it may be identical with this star, if the R.A. in the B.D. is increased by 5 seconds and the Declination by 2′.

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## *Nova 2 Geminorum.* By the Rev. T. E. Espin, M.A.

Estimates of the magnitude were made with a pair of field-glasses during the brighter phase, subsequently with a 3-in. achromatic. The following comparison stars were used:—

| | |
|---|---|
| θ Geminorum | Mag. 3·7 |
| τ ,, | 4·6 |
| B.D. +32°·1414 | 5·7 |
| B.D. +32°·1433 | 6·9 |
| B.D. +32°·1437 | 8·2 |

| | | |
|---|---|---|
| 1912 March 14 | 9.0 p.m. | 4·0 |
| 16 | 11.50 ,, | 4·8 |
| 17 | 8.0 ,, | 5·2 |
| 19 | 7.15 ,, | 5·4 |
| 20 | 8.0 ,, | 5·2 |
| 21 | 9.45 ,, | 5·5 |
| 22 | 8.0 ,, | 5·2 |
| 28 | 8.45 ,, | 5·9 |
| 29 | 10.45 ,, | 6·0 |
| April 1 | 8.15 ,, | 6·1 |
| 2 | 8.30 ,, | 6·0 |
| 6 | 8.15 ,, | 6·5 |
| 8 | 8.15 ,, | 6·5 |
| 10 | 8.30 ,, | 6·7 |
| 11 | 8.15 ,, | 6·7 |
| 1912 April 14 | 10.45 p.m. | 6·8 |
| 16 | 9.30 ,, | 6·8 |
| 19 | 9.45 ,, | 6·7 |
| 20 | 8.45 ,, | 7·0 |
| 21 | 9.0 ,, | 6·9 |
| 22 | 9.0 ,, | 7·1 |
| 23 | 9.0 ,, | 7·0 |
| 24 | 9.0 ,, | 7·1 |
| 30 | 9.30 ,, | 6·8 |
| May 2 | 9.30 ,, | 6·9 |
| 11 | 10.20 ,, | 7·3 |
| 12 | 9.45 ,, | 7·3 |
| 13 | 9.40 ,, | 7·3 |
| 18 | 10.0 ,, | 7·3 |

The following are the observations of colour with the $17\frac{1}{4}$-in.:—

| | |
|---|---|
| 1912 March 16 | Yellow. |
| 19 | Orange. |
| 20 | Deep yellow. |
| 22 | Deep orange. |
| 28 | Fine, but not deep red. |
| 1912 April 1 | Fine red. |
| 2 | Fine red. |
| 6 | Fine red. |
| 11 | Very red. |
| May 2 | Orange (3-in. refractor). |

### *Spectroscopic Observations.*

It is needless to quote these in detail. On March 16 the spectrum was continuous, with bright hydrogen lines. On March 19 the spectrum had quite changed, and had become banded. The nebula line was seen. March 20, C and F were equally bright. March 28, C extremely brilliant. April 1, C is now extraordinarily brilliant, if $\lambda 500 = 0$, $F = 7$, $C = 10$. Similar observations on April 2 and 6. April 11, the fading of the

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